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Kil-soo Jung

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EXAMINER

CHIO, TAT CHI

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/735,819	Applicant(s) JUNG ET AL.	
	Examiner TAT CHI CHIO	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 10 and 11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 and 10-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/735,850. Although the conflicting claims are not identical, they are not patentably distinct from each other because the medium of the instant application can be reproduced by the method of the copending application.

Consider claim 1, an information storage medium for storing multi-angle motion picture data corresponding to a motion picture, comprising: clip audio-video (AV) streams corresponding to motion picture data for different angles; and clip information corresponding to the clip AV streams wherein each unit of the clip information

Art Unit: 2621

comprises an entry point map comprises information on entry points of a corresponding one of the clip AV streams for random access, and information on whether each of the entry points is an angle change point through which the motion picture is reproduced from one angle to another angle, wherein the clip information is provided in a separate area from that of the motion picture.

Claim 1 of the instant application is conflicting with claim 1 of the copending application, which directs to the method of reproducing information from claim 1 of the instant application.

Consider claim 2, the medium wherein the information on whether each of the entry points is an angle point comprises location information of the entry points among the AV stream.

Claim 2 of the instant application is conflicting with claim 2 of the copending application, which directs to the method of reproducing information from claim 2 of the instant application.

Consider claim 3, the medium wherein the clip AV streams corresponding to motion picture data for different angles are interleaved with respect to each other.

Claim 3 of the instant application is conflicting with claim 1 of the copending application, which directs to the method of reproducing information from claim 3 of the instant application.

Consider claim 10, an apparatus for reproducing motion picture data for different angles corresponding to a motion picture from an information storage medium, the apparatus comprising: a reading unit which reads clip AV streams corresponding to the

Art Unit: 2621

motion picture data for different angles, the clip AV streams being interleaved with respect to each other, from the information storage medium; and a reproduction unit which reproduces the clip AV streams according to clip information corresponding to the clip AV streams provided in a separate area of the information storage medium from that of the interleaved clip AV streams, wherein each unit of clip information comprises an entry point map comprising information on entry points of a corresponding one of the clip AV streams for random access, and information on whether each of the entry points is an angle change point, wherein the angle change point is a point through which the motion picture is reproduced from one angle to another angle.

Claim 10 of the instant application is conflicting with claim 1 of the copending application, which directs to the method of using the apparatus of claim 10 of the instant application.

Consider claim 11, the apparatus, wherein the information on whether each of the entry points is an angle change point comprises location information of the entry points among the AV streams.

Claim 11 of the instant application is conflicting with claim 2 of the copending application, which directs to the method of using the apparatus of claim 11 of the instant application.

Claims 4-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/735,850 in view of Nakai et al. (5,999,698).

Consider claim 4, the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data.

Claims of the copending application 10/735,850 does not explicitly teach the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data.

However, Nakai et al. teach the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data (Fig. 38 of Nakai et al. shows that the angle change points correspond to boundaries of interleaved units). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate angle change points correspond to the boundaries of interleaved units to facilitate seamless angle change.

Consider claim 5, the medium further comprising playlist information which comprises at least one playitem that corresponds to the clip AV streams (Fig. 13 of Nakai et al. shows the playitems (cells) corresponding to the clip AV streams in the playlist (program chain)).

Consider claim 6, the medium further comprising playlist information which comprises at least one playitem having angle block information, wherein the angle block information comprises information on whether the playitem is for the motion picture data for different angles (Fig. 38 of Nakai et al. shows an angle block that comprises information on different angles).

Consider claim 7, the medium wherein the angle block information further comprises information on a number of different angles for the motion picture (Fig. 18 of Nakai et al. shows the number of angles information).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

This is a provisional obviousness-type double patenting rejection.

Claims 1-3 and 10-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/735,823. Although the conflicting claims are not identical, they are not patentably distinct from each other because the medium of the instant application can be reproduced by the method of the copending application.

Consider claim 1, an information storage medium for storing multi-angle motion picture data corresponding to a motion picture, comprising: clip audio-video (AV) streams corresponding to motion picture data for different angles; and clip information corresponding to the clip AV streams wherein each unit of the clip information comprises an entry point map comprises information on entry points of a corresponding one of the clip AV streams for random access, and information on whether each of the entry points is an angle change point through which the motion picture is reproduced from one angle to another angle, wherein the clip information is provided in a separate area from that of the motion picture.

Claim 1 of the instant application is conflicting with claim 1 of the copending application, which directs to the apparatus that reproduces information from claim 1 of the instant application.

Consider claim 2, the medium wherein the information on whether each of the entry points is an angle point comprises location information of the entry points among the AV stream.

Claim 2 of the instant application is conflicting with claim 2 of the copending application, which directs to the apparatus that reproduces information from claim 2 of the instant application.

Consider claim 3, the medium wherein the clip AV streams corresponding to motion picture data for different angles are interleaved with respect to each other.

Claim 3 of the instant application is conflicting with claim 1 of the copending application, which directs to the apparatus that reproduces information from claim 3 of the instant application.

Consider claim 10, an apparatus for reproducing motion picture data for different angles corresponding to a motion picture from an information storage medium, the apparatus comprising: a reading unit which reads clip AV streams corresponding to the motion picture data for different angles, the clip AV streams being interleaved with respect to each other, from the information storage medium; and a reproduction unit which reproduces the clip AV streams according to clip information corresponding to the clip AV streams provided in a separate area of the information storage medium from that of the interleaved clip AV streams, wherein each unit of clip information comprises

Art Unit: 2621

an entry point map comprising information on entry points of a corresponding one of the clip AV streams for random access, and information on whether each of the entry points is an angle change point, wherein the angle change point is a point through which the motion picture is reproduced from one angle to another angle.

Claim 10 of the instant application is conflicting with claim 1 of the copending application. It is noted that claim 10 of the instant application is broader than claim 1 of the copending application.

Consider claim 11, the apparatus, wherein the information on whether each of the entry points is an angle change point comprises location information of the entry points among the AV streams.

Claim 11 of the instant application is conflicting with claim 2 of the copending application. It is noted that claim 10 of the instant application is broader than claim 2 of the copending application.

Claims 4-7 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 2 of copending Application No. 10/735,823 in view of Nakai et al. (5,999,698).

Consider claim 4, the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data.

Claims of the copending application 10/735,823 does not explicitly teach the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data.

Art Unit: 2621

However, Nakai et al. teach the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data (Fig. 38 of Nakai et al. shows that the angle change points correspond to boundaries of interleaved units). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate angle change points correspond to the boundaries of interleaved units to facilitate seamless angle change.

Consider claim 5, the medium further comprising playlist information which comprises at least one playitem that corresponds to the clip AV streams (Fig. 13 of Nakai et al. shows the playitems (cells) corresponding to the clip AV streams in the playlist (program chain)).

Consider claim 6, the medium further comprising playlist information which comprises at least one playitem having angle block information, wherein the angle block information comprises information on whether the playitem is for the motion picture data for different angles (Fig. 38 of Nakai et al. shows an angle block that comprises information on different angles).

Consider claim 7, the medium wherein the angle block information further comprises information on a number of different angles for the motion picture (Fig. 18 of Nakai et al. shows the number of angles information).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

3. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture, or composition of matter and should be rejected under 35 U.S.C. 101. Certain types of descriptive material, such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture, or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping or sequence of musical notes read from memory and thereafter causes another defined series of notes to be played, requires a functional interrelationship among that data and the computing processes performed when utilizing that data. As such, a claim to that computer is statutory subject matter because it implements a statutory process.

4. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 1-7 recite an information storage medium which does not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

5. Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard

Art Unit: 2621

Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works, and a compilation or mere arrangement of data.

Both types of "descriptive material" are nonstatutory when claimed as descriptive material per se, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994)(discussing patentable weight of data structure limitations in the context of a statutory claim to a data structure stored on a computer readable medium that increases computer efficiency) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 1-7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory matter as follows. Claims 1-7 define an information storage medium. The specification defines the information storage medium as a carrier wave medium, which is a non-statutory matter.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kikuchi et al. (5,870,523).

Consider claim 1, Kikuchi teaches an information storage medium for use in a recording and/or reproducing apparatus, the information storage medium storing multi-angle motion picture data corresponding to a motion picture, comprising: clip audio-

Art Unit: 2621

video (AV) streams corresponding to motion picture data for different angles (Fig. 30); and clip information corresponding to the clip AV streams wherein each unit of the clip information comprises an entry point map comprising information on entry points of a corresponding one of the clip AV streams for random access (col. 27, lines 5-44), and information on whether each of the entry points is an angle change point through which the motion picture is reproduced from one angle to another angle (Fig. 37, step s23, Fig. 40, step s43, col. 27, lines 5-44), wherein the clip information is provided in a separate area from that of the motion picture data (Fig. 6, Fig. 25, and Fig. 26. The video information is stored in a different pack from the PCI and DSI data. Therefore, the examiner considers that the clip AV streams and the clip information are stored in a separate area).

Consider claim 2, teaches the medium, wherein the information on whether each of the entry points is an angle change point comprises location information of the entry points among the AV stream (col. 27, lines 5-44).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 3-7, 10, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kikuchi et al. (5,870,523) in view of Nakai et al. (5,999,698).

Consider claim 3, Kikuchi teaches all the limitations in claim 1 but does not teach the medium, wherein the clip AV streams corresponding to motion picture data for different angles are interleaved with respect to each other.

Nakai teaches the medium, wherein the clip AV streams corresponding to motion picture data for different angles are interleaved with respect to each other (col. 21, lines 59-66). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the clip AV streams interleaved with respect to each other to facilitate seamless angle change.

Consider claim 4, Nakai teaches the medium, wherein the angle change points correspond to boundaries of interleaved units of the interleaved motion picture data (Fig. 38 shows that the angle change points correspond to boundaries of interleaved units).

Consider claim 5, teaches the medium, further comprising playlist information which comprises at least one playitem that corresponds to the clip AV streams (Fig. 13 shows that playitem (cells) corresponding to the clip AV streams in the playlist (program chain)).

Consider claim 6, Nakai teaches the medium, further comprising playlist information which comprises at least one playitem having angle block information, wherein the angle block information comprises information on whether the playitem is for the motion picture data for different angles (Fig. 18 shows the number of angles information).

Consider claim 7, teaches the medium, wherein the angle block information further comprises information on a number of different angles for the motion picture.

Consider claim 10, Kikuchi teaches an apparatus for reproducing motion picture data for different angles corresponding to a motion picture from an information storage medium, the apparatus comprising: a reading unit which reads clip AV streams corresponding to the motion picture data for different angles, from the information storage medium (Fig. 1 and Fig. 37); and a reproduction unit which reproduces the clip AV streams according to clip information corresponding to the clip AV streams provided in a separate area of the information storage medium from that of the clip AV streams (Fig. 6, Fig. 25, and Fig. 26. The video information is stored in a different pack from the PCI and DSI data. Therefore, the examiner considers that the clip AV streams and the clip information are stored in a separate area), wherein each unit of clip information comprises an entry point map comprising information on entry points of a corresponding one of the clip AV streams for random access (col. 27, lines 5-44), and information on whether each of the entry points is an angle change point (Fig. 37, step s23, Fig. 40, step s43, col. 27, lines 5-44), wherein the angle change point is a point through which the motion picture is reproduced from one angle to another angle (Fig. 37, step s23, Fig. 40, step s43, col. 27, lines 5-44), but Kikuchi does not explicitly teach that the clip AV streams being interleaved with respect to each other.

Nakai teaches the clip AV streams being interleaved with respect to each other (col. 21, lines 59-66). Therefore, it would have been obvious to one of ordinary skill in

Art Unit: 2621

the art at the time the invention was made to make the clip AV streams interleaved with respect to each other to facilitate seamless angle change.

Consider claim 11, teaches the apparatus, wherein the information on whether each of the entry points is an angle change point comprises location information of the entry points among the AV stream (col. 27, lines 5-44).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAT CHI CHIO whose telephone number is (571)272-9563. The examiner can normally be reached on Monday - Thursday 9:00 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on (571)-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/735,819
Art Unit: 2621

Page 16

/T. C. C./
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621